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MICHELE PIERSON

Where Shadow Play is Cinema: The Exhibition and Critical Reception of Ken Jacobs' Shadow Plays in the 1960s and 1970s

ABSTRACT: Ken Jacobs' first shadow play was made for the New Cinema Festival in 1965. In his reviews of expanded cinema performances at the festival, Jonas Mekas grappled with the question of what makes a moving image cinema. The exhibition spaces in which Jacobs' 2D and 3D shadow plays were presented very much determined how critics wrote about them. This essay puts the archaeological gesture of Jacobs' shadow play and Nervous System performances in the context of work by other artists, journalists, historians and curators, which has been similarly engaged in expanding our sense of what cinema is or might be.

KEYWORDS: Ken Jacobs, expanded cinema, para-cinema, archaeologies of cinema, 3D, perceptual experience

In 1965 Ken Jacobs had made seventeen films in ten years, seven of them with fellow experimental filmmaker, underground actor, and photographer, Jack Smith. His first shadow play, *THIRTIES MAN: Chapter One of the Big Blackout of '65* was developed that year for the New Cinema Festival at the invitation of Jonas Mekas.¹ The festival took place at the Film-Makers' Cinematheque at the Astor Place Playhouse in New York City. Among the many activities that Mekas was engaged in at this time was that of film critic. In his regular "Movie Journal" column in the *Village Voice*, he wrote reviews, occasionally presented interviews with filmmakers, and performed the duties of publicist, not just for the Film-Makers' Cinematheque, but for avant-garde cinema more generally. Three months before the opening of the New Cinema Festival he ended a review of new work at the *First Theater Rally: New York*, which seemed to him to be using film and slide projection in arresting ways, with a plug for the upcoming New Cinema Festival. "Late this summer," he wrote, "the Cinematheque is organizing a huge survey of the various new uses of cinema. The leading artists of these new uses of cinema (expanded cinema) will take part."²

Jacobs and his wife and collaborator, Flo Jacobs, recall that at the time Jacobs received Mekas' invitation he couldn't afford to make a film.³ The idea of creating a shadow play derived in part, then, from the creative constraint of making cinema without film. The shadow play Jacobs developed for the New Cinema Festival struck Mekas as strange: "a political romance performed as a shadow and light play (and some color prisms)".⁴ In comparison to later shadow plays this was a bare bones production. In the early days, the shadow play screen was a huge roll of white paper.

Under the title, “STARRING,” a program for a repeat performance of *THIRTIES MAN* at the Film-Makers’ Cinematheque in 1967 lists: “NOEL SHERIDAN as THIRTIES MAN and FLO BETH as HIS GIRL with Jak Newman and Richard McGuinness as the MUTANTS and Ernie Gehr as the DIRECTOR; Gary Smith as the CAMERAMAN.”⁵ As with all future shadow play productions, behind the scenes performers outnumbered onscreen performers. Sheridan and Flo Jacobs were onscreen, the others worked the lights. The performance required long hours of rehearsal and, on the night, the cast referred to cue sheets. For onscreen performers and spectators alike, the focus of performance in this and other shadow plays was on the body in action; on gestures very precisely executed. An advertisement in the *Village Voice* featured this description: “Every movement, every gesture made it into a period piece filled with the essence of Bogart, Fitzgerald, flappers, pulp magazine images, Daily News Crimes, and the desperation of the Depression” (fig. 1). Unlike later shadow play performances *THIRTIES MAN* also had a narrative. Jacobs narrated from off-screen: “Hello, is this Loser’s Club? I’m ready.” An old 78 rpm recording of a song by the Comedian Harmonists—“*Die Liebe kommt, die Liebe geht*” (“Love comes, Love goes”)—played from a portable phonograph, c.1930s.

Some of the techniques in this and later performances, which critics would identify as cinematic, had been used much earlier in shadow play and phantasmagoria shows. Any moveable light source could be used to make shadows cast on a screen become larger and feel closer, or to send them beating a hasty retreat (phantasmagoria showmen moved the projector). By using two or more light sources with different intensities, super(im)positions could be created, and transitions between and within

scenes executed. Colored shadows could be produced with color filters. The more elaborate the effects, the larger the behind-the-scenes cast of unseen performers, operating the lights and moving other equipment into place. Jacobs built his own equipment to make *THIRTIES MAN*: a light box with a 300 watt straight-filament bulb, and a variety of portable “light-sticks.”⁶

From 1970, every shadow play was either partly or wholly in 3D. However, the transformations of screen space that unfolded weren’t necessarily describable as either 2D or 3D and sometimes confounded spectators’ abilities, if only temporarily, to orient themselves to them. No overarching narrative knitted the self-contained vignettes presented over the duration of these later performances together. Critics likened them to circus and vaudeville.⁷ Jacobs made this comparison himself in the titles of shadow plays produced in the early-1980s: *Art-Spooks Vaudeville One Night Stand* (1980) and *Audio-Visual Vaudeville* [also presented as *Audio-Optical Vaudeville*] (1982). These shadow plays may not have had a story structure, but episodes were connected by a common purpose, each one setting up a scene of perceptual discovery for spectators.

What we have in Jacobs’ shadow plays, then, is an expanded cinema practice creatively mining the territories of perceptual and phenomenological experience that shadow play and cinema share. Mekas might have found Jacobs’ first shadow play strange but, as we shall see, he also glimpsed in it and other performances at the New Cinema Festival, a future for cinema in which an industrial model of cinema, with its standardized projection and exhibition format, would be displaced by a greater variety of ways of making cinema. Rather than expanded cinema, the term Jacobs used in the

1970s to describe the shadow plays and two-projector film performances that he called the Nervous System, was *para-cinema*. A flyer for a “communal workshop in para-cinema” held at the Boulder Public Library in 1978 describes it as “a cinematic work employing some of the consciousness and values, but not the traditional means of cinema, i.e. camera and projector.”⁸ “A lot of cinema characteristics”, he told Lindley Hanlon in 1974, “are alive in a shadow play; it really is an original, non-mechanical form of cinema.”⁹ Of particular significance, here, is the fact that in neither Jacobs’ theorization of para-cinema, nor in Mekas’ reviews of the New Cinema Festival do we find a rejection of the idea of medium; and especially insofar as that term may be used to describe a practice, and the shared ways of thinking and doing that practice entails.

This essay situates the archaeological gesture of Jacobs’ shadow plays, and his theorization of them as para-cinema, within the context of writing by other artists, critics and historians, who have been concerned to show that the history of cinema is intertwined with the histories of other forms of art and entertainment. It bears pointing out, for instance, that in the mid-1960s histories of cinema tracing its technological development through devices such as the camera obscura, philosophical toys, the magic lantern, and chronophotography, were ready-to-hand in popular publications. We find other, more creative and far-reaching, attempts to theorize relationships between different mediums of expression in writing by modernist artists such as László Maholy-Nagy, Sergei Eisenstein and Jacobs himself. Over a period of decades, Jacobs has put together genealogies for Nervous System, and later, Nervous Magic Lantern performances in program notes that invite viewers to see them as extensions

of Cubist and Abstract Expressionist painting into cinema.¹⁰ Seen from this perspective, it is not only cinema that might be pursued through non-traditional means. Much earlier, Maholy-Nagy had similarly conceived of painting, not as a practice tied to the application of pigment on a two-dimensional surface, but as a field of formal-conceptual investigation that might be even more fruitfully pursued through other technologies and techniques: updated versions of the color organ, for instance, or through film.¹¹

Not everyone who wrote about Jacobs' shadow plays thought of them as cinema. Jacobs' primary interest in shadow play may have lay in the features that it has in common with cinema, but his own production moniker, the Apparition Theatre of New York, identified it as theatre. As we might expect, the contexts in which the shadow plays were presented very much determined who wrote about them and how they viewed them. Engaging closely with the exhibition and critical reception of the shadow plays and, more briefly, with discussion of the Nervous System, opens the door, then, to identifying other aspects of these performances that interested contemporary commentators. Chief among them, in the 1970s, were the kinds of perceptual experiences opened up by the introduction of 3D.

Archaeologies of Cinema

"The ground is shaking and the cinema we knew is collapsing, the screen, the projector, the camera, and all."¹² These words might have been written by any number of film theorists and historians writing in the second decade of the twenty-first century. André Gaudreault and Philippe Marion write: "Not to beat around the bush,

we can say that *cinema is no longer what it used to be!*”¹³ Or, there is this, from Francesco Casetti: “Cinema today is an expanding reality; or rather, expansion is the reality that best defines cinema today.”¹⁴ In fact, half a century lies between these two writers and the first. The first writer, excitedly announcing a seismic shake up of cinema is Mekas, reporting in the *Village Voice* on the New Cinema Festival.

Thinking on the fly, over four short reviews, Mekas feels his way around the question of what it is about some of these works—many of them involving multiple types of projection, a number of them combining projection with musical and/or another type of performance, some of them produced by avant-garde filmmakers, and others by avant-garde artists working mostly in other arts—that makes them cinema. It was clear to him that many of the performances at the festival had formal strategies and methods of working in common with happenings, Fluxus events, and developments within avant-garde theatre. But, in the context of the New Cinema Festival, the issue Mekas was grappling with was how far cinema could expand beyond an industrial model and still be cinema. Whereas his plug for the New Cinema Festival of a few months earlier had suggested that what made a performance identifiable as cinema was its use of film projection, it now seemed to him that in some of the works at the festival—performances by Smith and John Vacarro for instance—film projection was simply an auxiliary to theatre. In his first review of the festival he wrote: “Not all that’s happening at the Film-Makers’ Cinematheque this month is or can be called cinema.”¹⁵

At the heart of the accounts of cinema that Gaudreault, Marion, and Casetti offer is a story about new modes of distribution: as industry and institution, cinema had

proved remarkably adept at preserving theatrical exhibition against the potential threat to its hegemony that new forms of delivery invariably posed—until sometime in the late-twentieth-century. Writing in the mid-1960s, Mekas' story, on the other hand, is a story about new forms and practices. Out of avant-garde artists' interest in collaboration, performance, and film and other forms of projection, a new live or expanded cinema had emerged. For Gaudreault, Marion, and Casetti, something of what cinema has been is still recognizable in what it has become. So cinema, Gaudreault and Marion say is not what it used to be... "In some respects at least."¹⁶ And Casetti asks: "To what extent is expansion also a form of persistence?"¹⁷ For Mekas, too, a model of cinema in which a film gets projected for an audience in a theatre, on standardized equipment (and in a standardized way), is a reference point for thinking about the diverse works presented at the festival. We see this, for instance, when he writes in the first review: "Light is there; motion is there; the screen is there; and the filmed image, very often, is there; but it cannot be described or experienced in terms you describe or experience the Griffith cinema, the Godard cinema, or even Brakhage cinema."¹⁸

Like Casetti fifty years later, Mekas looked (far less consistently and assiduously to be sure), for continuity between cinema as it had mostly been shown since 1930 and cinema in its expanded forms. In locating cinema in a projected moving image "filmed or produced by other means" he presciently rejected the conflation of film projection and cinema.¹⁹ But in distinguishing cinema from performances in which, instead of being the organizing locus and central focus of audio-visual experience, the

projected moving image functions as backdrop or scenery, he also rejected the idea that any projected image whatsoever is cinema.

The historical gesture of Jacobs' shadow play was unique among the offerings at the New Cinema Festival. But to Mekas it presented a way of making sense of and, indeed, of historicizing, the sheer diversity of forms and practices that cinema seemed to be in the process of splintering into. "Isn't it possible," he asked, "that cinema is really nothing new? Isn't it possible that the art which we thought was our art, the 20th century art, isn't our art at all? Isn't it possible that the shadow and light artists of Persia, of China, of India were the real masters, the real magicians of the art of light, motion, image?"²⁰ In Mekas' suggestion that cinema is only a part, and not the oldest part, of a diverse art of light, motion, image, we can recognize something of the kind of thinking about cinema, which film historians have since come to describe as archaeological. In broad terms, these are histories of cinema that locate its development in multiple and intersecting fields of scientific inquiry, popular entertainment, and commercial enterprise.

Jussi Parikka and Thomas Elsaesser point out that the studies of early cinema, which film historians such as Noël Burch, Gaudreault, Tom Gunning, and Charles Musser undertook toward the end of the 1970s were an early model of such histories; displacing, in Elsaesser's words, "linear accounts, relying on 'organicist' models of birth, adolescence, maturity, decline and renewal".²¹ In the late-1970s and early-1980s, some of the early discoveries of this research were shared with experimental filmmakers and other artists, critics and curators, at the New York City workshop and screening space, the Collective For Living Cinema.²² It was here, for instance, that

Gunning and Musser presented a program entitled “Cinema: Circa 1905.”²³ In her review of this show in the *Downtown Review*, Joyce E. Jesionowski singled out their recreation of the news program, *The Pan American Exposition: Its Wonders and Tragedies* (Edison, 1901), for special mention. “In some ways,” she wrote, “its presentation was the showpiece of the “Cinema Circa 1905” program if only for the fact that it was the most coherent illustration of the incorporation of film into the mixed media event that was the audience experience of 1900. In combining film, lecture, slide show, filmed tableau and historical re-enactment, *The Pan American Exposition* used every mode of communication available to bring the audience to the scene of the important cultural event that became an important historical event: the site of McKinley’s assassination.”²⁴

But other kinds of archaeologies of cinema, different—but not altogether different—from those produced by film historians, have circulated more widely. Because in newspaper and magazine articles, museum exhibitions of the history of cinema, encyclopedia entries on motion pictures, and illustrated books—and, in more and less learned, productive, and discursive ways—we also find archaeologies of cinema. The best-known example is C.W. Ceram’s *Archaeology of the Cinema* (1965). The history of cinema told through nearly fifty pages of illustration (and accompanying text) is one in which cinema emerges as the “cultural successor” of many different kinds of screen entertainment: the shadow play, magic lantern and phantasmagoria shows, peep shows, panorama and diorama exhibitions.²⁵

Consider, however, a much earlier history of cinema: journalist E.V. Lucas’ reminiscence of his childhood cinema experiences in an essay in the *New York Times*

entitled “Cinema History”.²⁶ “The first cinema that most of us who are no longer young can remember was,” he wrote in 1923, “called the zoetrope (or wheel of life).” “The next cinema that I personally saw was a little flexible book of pictures which you turned over very rapidly, and behold! children played seesaw and howled their hoops.” Descriptions of magic lantern and dissolving view entertainments (“an ecstasy”) and panoramas with mechanical effects (“nothing could be more wonderful”) follow. A story that starts out by connecting one kind of moving image device to another through memories of the sorts of pleasure they elicited, narrows when Lucas gets to cinema: to the thrills of films seen at the end of every variety performance at the Palace Theatre (in London’s West End). As for the development of cinematography this, he offered, was largely due to the achievements of just a few men (Eadweard Muybridge, Étienne-Jules Marey and George Eastman).

A few years later, an article in the *Literary Digest* entitled “Beginnings of the Movies,” recapped a short history of cinema written for a journal published by the Society of Motion Picture Engineers, took a similar path.²⁷ It begins: “Our ancestors may not have had the movies, but they tried to, and the results of their efforts were certainly curious, as told in *Light* (Cleveland) by Carl W. Maedje. Five thousand years ago, in China, characters were made to dance weirdly about on a parchment screen by moving queer figures cut from buffalo hide before the light of a dingy oil lamp.” According to this digest of it, Maedje’s argument was that movies owe their beginnings to two “phases” of technological experimentation and development: the “projection phase” (shadow play and the camera obscura) and the “motion phase” (“when the great Michael Faraday invented the so-called ‘Wheel of life’”). Only the

vivid (if also rather dubious) description of shadow play, with which the article opens, indicates that what links cinema to earlier instruments for creating projected and moving images might not only be technological. All the same, in a magazine with a readership second only to the *Saturday Evening Post*, the history of cinema it offered identified the movies as the outcome of multiple fields of experiment and investigation.²⁸ The field of such popular histories widens considerably once we consider that even the entry under *motion pictures* in mid-twentieth-century editions of the *Encyclopedia Britannica* traced Louis and Auguste Lumière's development of the cinematographe through scientific study of the persistence of vision and the development of all kinds of projection devices for producing movement from still images.

Other sites of popular, archaeological speculation about the history of cinema have been museum exhibitions. Stephen Bottomore's bibliography of film museums points us towards a great many cinema collections, dating back to the 1920s, which have represented the history of cinema through moving image devices dating back centuries.²⁹ But what of traveling and temporary exhibitions? When the American Museum of the Moving Image (NY) re-opened its doors to the public, in 1988, its stated aim was "to explore the art, history and technology of the moving image media, and to do so through exhibitions, screenings, collections, and interpretative programs that examine film, television and video together, as components of the same 'moving image' continuum."³⁰ The museum's first floor gallery opened with "Masterpieces of Moving Image Technology," an exhibition displaying "parlour toys" such as the Zoetrope and phenakistoscope alongside devices such as an 1895 Cinématographe

Lumière and Edison's first motion picture film camera. In 1988, the project to think cinema in relationship to a longer history of moving images was both an old one, and one that had been refreshed, since the 1960s, by the expansion of the field of motion pictures to include new developments in both art and entertainment; television and video art, for instance, and early experimental computer-generated films and video arcade games. What sets film historians' thinking in this area apart from the archaeologies of cinema produced in most such contexts and, indeed, from the histories produced by artists, is their concern to excavate the limits as much as the possibilities for drawing connections between one field of scientific, artistic or industrial practice and another. As Gunning has put it: the complex field of moving images that existed before cinema was "not simply waiting for cinema to appear and perfect it."³¹ It is for this reason that film historians no longer use terms such as *proto-cinema* or even *pre-cinema* to describe the diverse kinds of moving images that excited audiences before and after cinema became an established field of entertainment.³²

Jacobs' shadow play was the only example of an explicitly archaeological practice at the New Cinema Festival. Here, after all, was a performance that sought to refresh audiences' experience of cinema by reinventing an older form of screen entertainment. For Mekas, however, the three, multiple projector performances that Stan Vanderbeek presented at the festival had something of the flavour of the fairground or circus. In his review, Mekas referred to Vanderbeek as "that old Barnum of cinema," describing his *Movie-Movies* as "a choreography for projectors—four movie projectors, three slide projectors, and a flashlight were used; projectionists

walked on stage in a ballet of hand-held projectors.”³³ In the following decade, Jacobs would make a more explicit and specific comparison between the contemporary projectionist-performer creating works of expanded cinema, and the phantasmagoria showman, or the showman/film exhibitor who, at the turn of the twentieth-century, crafted films on the fly during projection.³⁴ The performance strand of an archaeological expanded cinema cohered into an identifiable area of practice within experimental cinema over time.

In the half-century since the New Cinema Festival, experimental filmmakers have pursued an archaeological performance practice through the creative reinvention of earlier forms of screen entertainment, or, at least elements of them (shadow play, the multi-media event of early and silent cinema, phantasmagoria, and popular science lectures). Artists and experimental filmmakers for whom these choices have been important for the connection they allow audiences to make between cinema and earlier forms of screen entertainment include Zoe Beloff, Bradley Eros, Kerry Laitala, and Joel Schlemowitz. Jonathan Walley and Andrew V. Uroskie have shown that artists have also pursued an expanded cinema practice through installation, taking an archaeological path by remaking centuries old devices for creating moving images (Laitala’s phenakistoscope, *Retrospectroscope* [1997], Schlemowitz’s *Grand Magic Lantern Exhibition* [2003], Sandra Gibson and Luis Recoder’s camera obscura, *Topsy Turvy* [2013]), or by reworking discarded film technologies (Robert Breer’s mutoscopes and Alan Berliner’s paper film sculptures).³⁵

In the 1970s, Jacobs was by no means the lone archaeologist of the cinema among experimental filmmakers. Hollis Frampton, for instance, took a scholarly interest in

archaeological approaches to excavating the multiple arenas of experiment, entertainment, and enterprise that contributed to cinema's emergence; producing a stunningly reflexive examination of any such historiographical endeavour in his essay, "For a Metahistory of Film: Commonplace Notes and Hypotheses" (1971). He pointed out that such histories are always partly about dead-ends and, further, that they owe as much to conceptual invention as to observation of any facts. What sets Jacobs' contributions to this area of artistic and theoretical exploration apart is the constancy with which he has pursued it—through practice and teaching and, particularly since the 1980s, through writing.³⁶

Re-inventing Shadow Play, Re-inventing Cinema

The shadow plays were often but not, as we shall see, exclusively presented in venues where experimental films were shown. The situation for post-war American experimental films in New York City up until 1965 was one of exclusion from the mainstream of cinema and art exhibition (the Museum of Modern Art [MoMA] along with first-run cinema theatres). This situation started to change with Willard Van Dyke's appointment as Director of the Film Department at MoMA in 1965.³⁷

What did experimental filmmakers and critics besides Mekas make of Jacobs' early shadow plays? Mekas wasn't wrong when, in 1965, he called himself the lone historian of the new cinema. The only other account of *THIRTIES MAN* that we have is by Sheldon Renan in *The Underground Film* (1967). Renan mentions that shadow plays were performed at the Bauhaus in the early-1920s, but it was not within the scope of his book to look any more closely at Bauhaus artists' interests in this area.

Where we do find accounts, in the late-1960s, of Kurt Schwerdtfeger's and Ludwig Hirschfeld-Mack's color light plays (which in Schwerdtfeger's case, developed directly out of his research into shadow play), is in accounts of light art; an area of exhibition and criticism that all but bypassed avant-garde cinema.³⁸

Renan's approach to *THIRTIES MAN* wasn't to ask whether shadow play has, or might be seen to have, characteristics in common with cinema. He began, rather, from the proposition that it is the experimental filmmaker who turns the work of shadow play into cinema by using it "to produce the approximate effect of film."³⁹ This, he suggested, is chiefly accomplished through the adoption of techniques that register for audiences as specifically filmic. In this vein he wrote: the performers' "shadows, seen by the audience on the other side of the screen, form the movie. Location and size of the shadow image is controlled by location of light sources. It is possible to have 'close-ups' and 'long shots.' And by manipulating the sources in certain ways, it is possible to have cuts and dissolves, and even multiple-imposition."⁴⁰ As we shall see, another critic, writing some years later about another shadow play performance, would point out that the techniques for achieving these effects were known to phantasmagoria showmen centuries earlier.⁴¹ However, Renan reasonably assumed that they would register most immediately for audiences as cinematic conventions, as common to avant-garde cinema in the mid-twentieth-century as to mainstream cinema.

The occasion of the next shadow play to be reviewed was the Festival of Independent Avant-garde Film held at the National Film Theatre (NFT) and Institute of Contemporary Arts in London (ICA) in 1973. In fact, Jacobs presented two shadow

plays at the festival, one for the regular festival program, and another for an audience of children. Flo Jacobs recalls that at the shadow plays developed specifically for children, kids loved to see corn popping over a hot plate or people blowing bubbles, and especially enjoyed it when ping pong balls, thrown towards the 3D lights, seemed to come directly to each kid.⁴²

In a long overview of the festival in *Sight & Sound*, Tony Rayns clearly drew from P. Adams Sitney's landmark essay "Structural Film" (1969) to set the contemporary scene. "The vast majority of films in the Festival" he wrote, "were primarily formal in their concerns, many of the film-makers choosing to eliminate content as such, or to reduce it to a level at which its ambiguities are kept in check."⁴³ He was just as clearly concerned, however, to register British filmmakers' own contributions, in theory and practice, to articulating new directions for artists' filmmaking, and particularly in the area of expanded cinema. The festival featured a number of expanded cinema performances by British filmmakers involved in the London Filmmakers' Co-operative. Works by Gil Eatherly, William Raban, and Malcolm Le Grice were presented together as the work of The Filmaktion Group.⁴⁴ One of Le Grice's expanded cinema performances at the festival, not mentioned in Rayns' review, was *Horror Film 1*. For this performance, Le Grice utilized three film projectors, color loops, an audio tape of heavy breathing, and his own body to create a shadow play of sorts—not back projected and in 3D like *Horror Film 2* (not performed on this occasion)—but a kind of shadow play all the same.⁴⁵

Rayns looked, not to performances by Jacobs' British contemporaries, but to Méliès to capture the flavour of the *Apparition Theatre of New York* (on this occasion

Jacobs chose his production moniker for the work's title). "The event," he reported, "was hampered by technical problems and recalcitrant audiences; but none the less successfully incorporated a variety of stimuli: 3-dimensional shadow play viewed through polaroid glasses, a 'stereo' exploration of the auditorium space through aural signals from different points, and several 2-dimensional films featuring lateral camera-motion which revealed an illusory depth when viewed with a polaroid lens over one eye. The effect, both playful and earnest, was Méliès-like in its endeavour to restore a childlike sense of *wonder* to the spectacle."⁴⁶ That audiences were recalcitrant was a view shared by others. Mekas offered that: "The London audiences, used to straight movie evenings, were rumbling and it took them some time to begin to get into Ken's world and rhythm."⁴⁷ Given that the performance was part of a larger program of expanded cinema events, and Le Grice's own recollection that festival screenings "were well attended by an informed and receptive audience" (of experimental filmmakers) it is unlikely that this London audience was simply chafing at not getting the straight movies it was used to.⁴⁸

Jacobs' shadow play was, however different to the expanded cinema presented by British filmmakers on this occasion. The one constant among all the inventive, surprising, pithy and, frankly dazzling, British expanded cinema performances at the festival was film projection—radically reconfigured. A statement Le Grice wrote about his own practice for festival organizers, David Curtis and Simon Field, became something of an unofficial statement on the direction of British filmmakers' work more generally.⁴⁹ The statement was widely excerpted in reviews of the festival, including the review by Rayns, and Mekas reproduced it in full in one of his "Movie

Journal” columns. The task for the avant-garde artist, Le Grice wrote, is “the re-invention of cinema from SCRATCH... or at least from celluloid, projector lamp, light, screen, duration, shadow, emulsion and scratch.”⁵⁰ What audiences had in the *Apparition Theatre of New York* and *Horror Film 1*, then, was two approaches to the creative expansion of cinema: the first took the diverse field of moving images before the development of film and the standardization of its exhibition as its starting point; the other the moment of its standardization.⁵¹

Cinema and Theatre

Over the rest of the decade, Jacobs presented shadow plays at a number of experimental film, theatre/performance, art (Walker Art Center, Documenta 6), and educational spaces.⁵² On the two occasions when performances were presented in alternative theatre/performance spaces—“*Slow Is Beauty*”—*Rodin* at the short-lived Idea Warehouse (fig. 2) and *Air of Inconsequence* (1977) at the Entermedia Theatre, as part of an experimental theatre festival called The Bunch Festival—they were reviewed by literary and theatre critics who didn’t see them as cinema.⁵³ A number of factors contributed to the critical reception of the shadow plays as both experimental cinema and experimental theatre. Most obvious is the fact that they were presented in theatre/performance spaces, and advertised as productions of the Apparition Theatre of New York. In all kinds of alternative art spaces, avant-garde performance was also increasingly being presented simply as *performance*. In RoseLee Goldberg’s words, performance came to describe “a permissive open-ended medium, with endless variables”.⁵⁴ One of the results of this development was that, in some contexts at least,

critics felt free to simply (and very usefully) describe the particulars of individual performances, without situating them in relationship to a history of practice, or seeking to make any broader theoretical claims about them. Developed in conversation with Jacobs, Dorothy S. Pam's extraordinarily detailed account of "*Slow Is Beauty*"—*Rodin* in *TDR: The Drama Review* is an important example of such criticism. Pam identified commonalities between Jacobs' Apparition Theatre and earlier shadow plays, flipbooks and magic lantern shows. What she didn't say was that all of these forms of entertainment had also been compared to cinema. Readers, on the other hand, could still make the comparison themselves, and the essay's publication in *TDR* ensured it a wide readership.⁵⁵

Jacobs' reinvention of shadow play as cinema also entailed reinvention of another kind. When he began experimenting with polarized light to develop 3D shadow plays at the end of the 1960s he wasn't aware of any earlier applications of 3D to shadow play. Although the Soviet writer, N.A. Valyus claimed that stereoscopic projection was used in shadow play "before the appearance of stereo-cinema" and was known as "the miracle of shadows," his research doesn't look at specific examples.⁵⁶ In his history of stereoscopic cinema Ray Zone noted that in the early twentieth-century an anaglyph process for producing stereoscopic shadows of live performances was patented and licensed to Florenz Ziegfeld, who used it in the 'Ziegfeld Follies' from 1924-25.⁵⁷ Jacobs found a booklet for one of these shows starring Ziegfeld star, Eddie Cantor, in a thrift store some time in the 1970s. His thought at the time, he has said, was that "3D shadow play was too easy and too obvious not to have been done."⁵⁸ The first shadow play to incorporate elements of 3D was *Restful Moments* (1970),

developed in collaboration with students as part of a class he taught in the Cinema Department at Binghamton University (State University of New York).

Whether critics and artists viewed Jacobs' shadow plays from the perspective of experimental/expanded cinema or approached them as theatre/performance, in most cases they identified 3D with the reflexive enjoyment of illusion.⁵⁹ Within the context of experimental cinema, the kind of exploration of visual perception that the 3D shadow plays invited could also be seen to be part of a wider interest, among filmmakers, in the psychophysiology of perception. In an essay written on the occasion of a major exhibition of avant-garde film in London in 1975, filmmaker Birgit Hein identified exploration of illusionism, medium, and perception as key concerns of structural film (as, indeed, had writers such as Sitney and Annette Michelson).⁶⁰ From her brief commentary on flicker films and even briefer comments on the 3D in shadow play we can, I think, extrapolate the argument that certain types of perceptual experience confront spectators with the material reality that what they see isn't completely within their control. The reflexive spark of 3D derives, on this understanding, from spectators' own experience of illusion as the achievement of a technological system completed by a human perceptual system. In Hein's words: "The images and actions [Jacobs] creates although they have a 3D quality exist only in the perception of the spectator."⁶¹

What was the attraction to art that exploits the brain's capacities and incapacities for processing certain types of sensory stimulus? One answer is that it opened up the possibility of an art that communicates directly with the body; an art recovering or attaining, in Paul Sharits' terms, "non-conceptual responses to the world".⁶² Another

answer, and the one we get from Jacobs, is that optical illusions tell us how our brains work. Speaking to John Matturri about the 3D in shadow play and Nervous System performances in 1980 he commented: “But the real material worked with is the way we see. So this could be the approach to an art where the working material is electricity to the brain. I’m working vision itself. The works themselves are transient, not so much objects as instruments to touch and probe.”⁶³ Rather than bypass conceptual thought, art might work the fault-lines of perception, keeping spectators in active doubt about what they are seeing. It is the strangeness and anomalousness of perceptual phenomena, Jacobs often tells spectators, which keep them alert.⁶⁴

That spectators might enjoy the experience both of having their perceptual faculties worked upon and of steering that experience through the choices they could also still make, that they might relate to images that are neither 3D nor 2D, not as failures to achieve the fullness of 3D illusion but as new territories to be explored—these are aspirations that have often been expressed by Jacobs and, aspirations, moreover, which artists and critics have also identified in the work. But expressed in such broad terms, the same might be said of all of Jacobs’ 3D performances: not just the shadow plays, but the Nervous System and, later, Nervous Magic Lantern performances too. We miss the unique possibilities for thinking about cinema and the history of cinema that each invites, if we don’t attend to their differences. We also, and just as importantly, miss the individual character of their pleasures.

Between 1965 and 1982, Jacobs developed at least twelve new shadow play performances. Since then he has presented only two further shadow plays, both of which combined sequences from earlier performances.⁶⁵ Those of us who weren’t

there can't experience what audiences at early shadow plays experienced. The last shadow play Jacobs presented was a version of "*Slow Is Beauty*"—*Rodin*—part of the exhibition, *X-screen: Film Installations and Actions in the 1960s and 1970s*, at the Museum of Modern Art Ludwig Foundation Vienna (MUMOK) in 2004.⁶⁶ It was composed of sequences taken from the 1974 version and others such as *Audio-Visual Vaudeville*, and developed in collaboration with the local art students performing in it. Jacobs has, on occasion, screened a digital video of this performance. It's an imperfect, noisy image, shot in low light—but perfectly good enough to enable present-day viewers to see that the shadow plays produced, in fact, some of the most startling 3D illusions of all of Jacobs' many 3D works. It also enables us to see for ourselves what is so particular to the *mise-en-scène* of 3D illusion in the shadow plays. Because the charm and informality, which critics enjoyed about the performances in earlier shadow plays is all there. Take this vignette: it begins with a woman lying on the floor. She ties her shoes, does a headstand, doesn't quite manage another one, and palms on floor, twists and turns. Facing the ceiling, knees bent and back straight, she executes a couple of lateral flips. The second lands her out in an impossible space between screen and audience. She stands up and begins to dance, not a soft-shoe shuffle exactly, but something looser and a bit like it. Another dancer joins her. However, he is in front of the screen rather than behind it. Moving from acrobatics into a *pas de deux*, the sequence moves from offering spectators the opportunity to explore the effects of volume and emergence, which the woman's twists and flips on the floor provide material support for, into something more complicated. How is it, spectators are bound to ask, that the silhouette of the dancer in

front the screen appears to move behind the other dancer, and further into the serene environs of recessed space?

Not all sequences have the same 3D arc. Most leave spectators to discover the uncanny and often perplexing transformations of space that occur over the time of the action for themselves. One, however, adopts a didactic mode of scientific demonstration. A man appears on the stage beside a wooden ladder, his arm outstretched to grasp one of its four legs. Jacobs is heard to ask: “Where is this man in relation to the ladder? Which side of the ladder is closest to you?” The side of the ladder that first appeared farthest away now appears closest. The demonstration mode of illusionist presentation draws attention to the unseen mechanism of illusion without, of course, actually revealing it.

One of the uniquely enjoyable aspects of the shadow plays is the fact that the coordinated actions of onscreen and off-screen performers, and the achievement of illusion, are completely intertwined. People have to do things to make other things happen. Erika Munk and Pam were the only critics to comment on this intertwining of human and mechanical means, Munk most insightfully when she wrote in a review of *Air of Inconsequence* (1977) in the *Village Voice*: “A vignette in which a couple of children do gymnastics was charming: their lithe shadow-bodies cartwheeled among us—while we were at the same time sympathetically aware of the kids’ hard work behind the screen—as a solemn voice announced each flip and turn.”⁶⁷ The children were the Jacobs’ children, Azazel and Nisi. Moments in the digital video of “*Slow Is Beauty*”—*Rodin* when performers’ shadow-bodies move out into the space between screen and audience, don’t have the same intimacy. No Blu-Ray or high-definition 3D

play back system can make the liveness of that action fully tangible. It has to be imagined. What does translate is the hard work of performers, in collaboration with unseen others, which is required to make the 3D happen.

This intertwining of cinema and theatre, and performer and 3D illusionism is unique to shadow play. Audience members at early shadow plays were often asked to perform simple actions: put on your glasses, watch the light wand, place a filter over one eye, ask yourself which side of the ladder is closest to you. “These tinkering, cuttings and pasteings, and holding up of images to light, are inextricably tied,” David Ehrenstein has suggested, “to a fundamental populism.”⁶⁸ Certainly such invitations to participate were part of the fun of the show, and an avenue of accessibility for audiences. Collaboration between audience members and performers takes other forms as well. Pam commented on the fact that performers make mistakes. No matter, they start again or pick up where they left off. Audience members are left to run with it, recognizing that the effort, or process of setting up the illusion is not distinct from the thing of it. Through all of this—the instructional and demonstration modes of illusionist presentation, along with the behind-the-scenes organization of the space of exploration and discovery, the practiced lightness of performers’ actions, and unfussed attitude to doing things over again, the shadow plays communicate to audiences—never, as we’ve seen with a guarantee of cooperation—that how the show feels depends on their collaboration.

For Sergei Eisenstein, too, what thinking about stereoscopic cinema brought into focus were all the techniques theatre and cinema had devised, and in some cases shared, for increasing spectators’ sense of participating in the production. In “On

Stereocinema” (1947) he proposed that 3D cinema had to be understood to be part of an older tendency within theatre to reunite spectacle and audience, actor and spectator.⁶⁹ The archaeology of 3D cinema that he offered in the late-1940s is remarkable for its persuasive marshalling of technical developments within stage, auditorium, and lighting design, as well as the craft of acting, in support of this view. Most dazzling and suggestive, even in the face of the bald neatness of the conceit, is his mapping of the two poles of 3D—the illusion of recession (positive parallax) and the illusion of protrusion (negative parallax)—onto two main avenues for overcoming the separation of spectacle and audience in theatre and cinema: the development, on the first count, of techniques for drawing spectators into the spectacle and, on the second, for throwing a *rampe* across the stage/screen to bring the performance into the audience. Although this aspect of his argument is less explicit each also has psychological implications for spectators, casting them either as participants in the action, or as participants in the concrete reality of the performance. On one side: re-enactment, popular cinema, and naturalism (in acting as in scenography). On the other side: burlesque and variety theatre, direct address, and *HELLZAPOPPIN'* (H.C. Potter, 1941). What we have, here, is participation, on the one hand, through immersion in the action and, on the other, through appreciation of the concrete, material means of achieving it (whether it be an illusion, an actors' performance, a joke, or idea). If both can be seen as collaborative modes of spectatorship (since immersion doesn't happen if you don't want it to or aren't prepared to work at it), only the latter overtly acknowledges spectators' participation.

As the accounts of Jacobs' optical vaudeville already examined here clearly indicate, the participatory pleasures of shadow play more often than not directly addressed spectators as collaborators in the realization of the performance. In Eisenstein and Jacobs we have two, very different experimental filmmakers, theorists, and 3D enthusiasts, who have both understood the history of cinema to be intertwined with the history of theatre. Over and above the difference of their means, the discursive mode of Eisenstein's essay and the much, much less discursive mode of Jacobs' shadow play, the radical gesture, and difference, of the shadow play lies in its rejection of a developmental narrative for cinema. The avant-garde shadow play stands in repudiation of the idea that cinema expands its capacities for engaging and challenging audiences in new ways through its embrace of new technologies.

The Nervous System

Jacobs developed two new shadow plays in the early-1980s, but from 1975 to 2000 his creative energies in the area of performance were largely absorbed by the Nervous System. This 3D projection system used two 16mm or 35mm projectors, capable of frame-by-frame advance, to project two identical films just a little out of sync and in superimposition (Jacobs operated one and Flo Jacobs the other). From 1980, the setup of the Nervous System included a shutter-propeller fixed in front of the projectors.⁷⁰ The Swiss-born artist, Alfons Schilling, who began using different shaped propellers in 3D slide projector performances in the late-1970s, suggested the innovation. It was in every sense another example of creative reinvention. Because, while shutter systems for producing stereoscopic images were developed in the late-

nineteenth-century—the first Soviet 3D films also used a shutter system—they were implemented, in both cases, with the aim of achieving only one, ever elusive, thing: perfect 3D illusionism. But for Jacobs, as for Schilling, a chief attraction of the ‘Schilling Effect’ was its capacity to render space molten and plastic—that, and the unexpected temporal-perceptual anomaly, which it introduced. For in addition to bringing depth to still images the propeller introduced an illusion of constant forward movement (which Jacobs dubbed ‘eternalism’).

The exhibition history for Schilling’s own performances on the one hand draws our attention to the extent to which, in New York in the 1970s, different kinds of exhibition spaces framed how the work shown in them was viewed. But it also highlights the extent to which artists working with different media shared a common interest in the study of perception. Over the twenty-four years that he lived in New York, Schilling pursued his longstanding interest in 3D through painting, photography, performance, sculpture, film, and the development of various 3D headsets. His first 3D slide performance was developed in collaboration with Woody Vasulka and presented at The Kitchen (founded by Woody and Steina Vasulka in 1971). A performance at The Kitchen in 1972 appeared on a poster as *3-D Binocular Vision: “14 Street-Out,”* and is described elsewhere as “a series of 3-dimensional slides encompassing Iceland and the New York Subway System. These were accompanied by live music generated by W. Vasulka on the Putney *synthesizer*.”⁷¹ The Vasulkas initially conceived of the Kitchen as a workshop where video artists might work closely with composer-musicians and sound engineers to explore the unique art material of electronic sound and image. Growing out of the activities of the

‘Perception’ group of video artists (the Vasulkas and Eric Siegel and Vince Novak), early programming included open video screenings, live video performance (with and without collaboration from composer-musicians), electronic and contemporary music (including jazz), and seminars on “sensory awareness and cybernetics”.⁷² In those early years the Vasulkas also presented work implementing different techniques for achieving stereoscopic effects.⁷³

Schilling’s “sold-out, standing room only” performances of *Binocularis* and *Time in Binary Images* at the Collective in 1977 were a return visit for him.⁷⁴ Here, at the Collective, where Jacobs’ ideas about para-cinema had encouraged programmers (and former students) to embrace cinema in the fullness of its post-1960s expansion, cinema wasn’t only a projected film. This rejection of the conflation of cinema and film was not, as we have seen, a rejection of the concept of medium, but a reconsideration of it. Cinema could still be seen as a medium, the architectural, technological and formal-historical parameters of which would continue to have to be negotiated, but film projection didn’t have to be among them. This contingent, but not entirely open-ended concept of medium, made every new presentation of expanded cinema a test case: is this it? Is this what it takes to produce an experience of cinema? For some members of the audience at Schilling’s performances at the Collective the answer was yes—this is cinema!⁷⁵ A few years later, Jacobs himself wrote: “Perhaps you have also been awed by his projections of stereo-slides in which space seems entirely malleable under his touch: an ultimate cinema-of-two frames, infinitely rich in effect. With his encouragement I approached this new continent of perceptual experience in a further chapter of THE IMPOSSIBLE: HELL BREAKS LOOSE”⁷⁶

For his part, Schilling did not think of his slide performances in this way and nor, presumably, did audience members at some of the performances presented elsewhere. In conversation with Ken Ross he commented: “This is very interesting, that you feel that I move into cinema, because I’m not consciously thinking of that at all, and I have no desire to make myself a filmmaker. Whatever, I don’t mind, but I’m not against it either.”⁷⁷ Where thinking about cinema did have some interest for Schilling was around the matter of what it revealed about the relationship between motion and depth perception. He told Ross: “Now talking about it as cinema, is interesting because I tried to figure out the speed of that transformation from left eye to right eye projection. And I found out that it works best within a speed of between a 16th to a 26th of a second. It’s definitely something like a scientific proof of the way motion in cinema is”.⁷⁸ Drawing, no doubt, from his own conversations with Schilling, curator John G. Hanhardt situated Schilling’s work at a presentation that was part of the New American Filmmakers Series at the Whitney Museum of American Art, within a long history of avant-garde cinema concerned to bring spectators to an awareness of the material processes of illusion. In Schilling’s case, he wrote, “This is achieved through a kind of materialization of consciousness: by acknowledging the materials constituting the visual experience through the eyes and the brain. In other words, in this work we realize an aesthetic experience in perceiving the art work as a means to understanding visual experience.”⁷⁹

This is familiar territory, and in artists’ and critics’ accounts of Jacobs’ Nervous System and Nervous Magic Lantern performances, we also find writers identifying in them a challenge to spectators’ experiences of themselves as masters of their own

vision. But each of these strands of Jacobs' expanded cinema practice also opened up horizons of perceptual experience and thinking unique to each. In the 1970s, Jacobs shared with filmmakers such as Frampton (*Public Domain*, 1972, *Gloria!*, 1979) and Gehr (*Eureka*, 1974), among others, an interest in the first decade of filmmaking.⁸⁰ With its programming of early twentieth-century film, and lectures on early film genres and exhibition by film historians, the Collective For Living Cinema was, as we have seen, a space for the creative presentation and rethinking of the early years of film and film culture. Into this mix, Jacobs Nervous System performances made looking at the smallest element of even a single film from this period like no film viewing experience before. Four of the five performances in the series, *THE IMPOSSIBLE*, developed between 1975 and 1980, used footage taken from turn-of-the-century films.

The titles of some later performances, using footage from utilitarian or disposable genres destined to be forgotten (a 1920s stag film, a Castle Film compilation of World War II footage, and a newsreel documentary about the relationship between the United States and the Philippines), clearly signal how spatial and perceptual anomaly might have abutted cinema's powers of historical, material witness to produce powerful, and often unsettling, experiences: *XCXHXEXRXXIXEXSX* (1980), *Ken Jacobs' Theater Of Unconscionable Stupidity Presents CAMERA THRILLS OF THE WAR* (1981), and *MAKING LIGHT OF HISTORY: The Philippines Adventure* (1983). Maturri recalled moments, for instance, during the performance of *Ken Jacobs' Theater Of Unconscionable Stupidity*, of being enthralled by the beautifully illusionist qualities of the imagery, only to have the horrid reality of the footage come back into

focus.⁸¹ “I am well aware,” Jacobs told him in response, “of how stupid and unconscionable it is to aestheticize such material. So I do it. To exacerbate. Horrify. It forces a reaction just because it seems to be ignoring content, seems brutally blithe and unconscionable.”⁸² The intensification/exacerbation of potentially disturbing material, sometimes by working just a few frames of footage over a long period of time, could also divide audiences: as it did, most spectacularly, when Jacobs presented *XCXHXEXRXXIXEXSX*, a performance that reworked a French stag film from the early-1930s, at the 38th Annual Robert Flaherty Seminar in 1992.⁸³

We don’t recover the real variety of ways that Jacobs’ shadow plays registered for individual spectators and audiences, or were exciting to think about, by looking at what critics—some of them also experimental filmmakers and programmers—made of them. But by looking at these commentaries in context we do get a sense of the scope and consistency of their interest and appeal for avant-garde audiences in the 1960s and 1970s. We have seen, too, that artists and writers, sometimes working in very different contexts, have taken similar approaches to mapping commonalities between cinema and other forms of art and entertainment. Jacobs, like Eisenstein and Maholy-Nagy, but also like Mekas writing about the New Cinema Festival in 1965, have all sought to square an understanding of cinema as medium, with the further understanding that some of the things that make a projected moving image feel like cinema don’t belong to it alone.

¹ Mekas co-organized the festival with John Brockman. I have used the original wording of the title to refer to the first shadow play. The final wording of the title is *THE BIG BLACKOUT OF '65: Chapter One "Thirties Man"*.

² Jonas Mekas, "The Expanded Cinema of Robert Whitman" (June 3, 1965), in *Movie Journal: The Rise of a New American Cinema, 1959-1971* (New York: Collier Books, 1972), 190.

³ Details about the making of *THIRTIES MAN: Chapter One of The Big Blackout of '65*, including details about the equipment used and the structure of the performance, have been provided by Flo Jacobs unless otherwise indicated. Email correspondence with author December 9, 2015 and July 31, 2016.

⁴ Jonas Mekas, "More on Expanded Cinema: Emshwiller, Stern, Ken Jacobs, Ken Dewey" (December 2, 1965), in *Movie Journal*, 216.

⁵ Author file for Ken Jacobs, Anthology Film Archives Library, New York (NY).

⁶ For 3D shadow plays Jacobs built a light-box that contained two 300 watt straight-filament bulbs that had filter-holders that contained two polaroid filters placed in front of the two bulbs.

⁷ See Dorothy S. Pam, "The N.Y. Apparition Theatre of Ken Jacobs," *TDR: The Drama Review* 19, no. 1 (March 1975): 108. Also see Charles Bergengren, "Febrile Fiber Phantoms": Ken Jacobs at the C.I.A.," *TDR: The Drama Review* 41, no. 1 (Spring 1997): 83.

⁸ Author file for Ken Jacobs, Anthology Film Archives Library.

⁹ "Kenneth Jacobs, Interviewed By Lindley Hanlon [Jerry Sims Present] April 9, 1974," *Film Culture* 67-68-69 (1979): 71.

¹⁰ The Nervous Magic Lantern is a homemade projection apparatus that works much like magic lanterns of old. It can be fitted with different lenses, and hand-painted slides or objects can be tilted and moved back and forth in front of the lens during projection. As with the Nervous System, the Nervous Magic Lantern is equipped with a shutter-propeller.

¹¹ See László Maholy-Nagy, *Painting, Photography, Film*, trans. Janet Seligman (London: Lund Humphries, 1969), 9. First published 1925.

¹² Jonas Mekas, “More on Expanded Cinema,” 217.

¹³ André Gaudreault and Philippe Marion, *The End of Cinema? A Medium in Crisis in the Digital Age* (New York: Columbia University Press, 2013), 8.

¹⁴ Francesco Casetti, *The Lumiere Galaxy: Seven Key Words for the Cinema to Come* (New York: Columbia University Press, 2015), 111.

¹⁵ Mekas, “On New Directions, On Anti-Art, On the Old and the New in Art” (November 11, 1965), in *Movie Journal*, 208.

¹⁶ Gaudreault and Marion, *The End of Cinema?*, 8.

¹⁷ Casetti, *The Lumiere Galaxy*, 102.

¹⁸ Mekas, “On New Directions,” 208.

¹⁹ *Ibid.*, 209.

²⁰ Mekas, “More on Expanded Cinema,” 217.

²¹ Thomas Elsaesser, “Media Archaeology as symptom,” *New Review of Film and Television Studies* 14, no. 2 (2016): 185. For a broader view of the field of media archaeology see Jussi Parikka, *What is Media Archaeology?* (Cambridge, UK and Malden, MA: Polity Press, 2012).

²² The founding members of the Collective For Living Cinema are Ken Ross, Phil Weisman, Lusche Sacker, Andrea Graff and Mark Graff; all filmmakers and former students of the Cinema Department at Binghamton University (State University of New York), where Jacobs taught from 1970. Right from the beginning, a great many other artists and filmmakers participated in the wider community of the Collective and kept it running.

²³ Presented April 29, 1979.

²⁴ Joyce E. Jesionowski, "Senses of Early Cinema: *Circa 1905*," *The Downtown Review* 1, nos. 3-4 (May-June 1979), 3-4. Other programs on early film at the Collective For Living Cinema included, Lucy Fischer, "Magic Films: The Images of Women (1898-1907), February 22, 1980 and Tom Gunning, "Moving Image, Moving Eye," described as "a lecture/demonstration of the spectator's relation to early visual entertainment, including nineteenth-century trick magic lantern slides, illustrated song slides, and early films," April 14, 1982.

²⁵ See C.W. Ceram, *Archaeology of Cinema* (London: Thames and Hudson, 1965).

²⁶ E.V. Lucas, "Cinema History," *New York Times*, August 5, 1923, Amusements, 2.

²⁷ See "Beginnings of the Movies," *The Literary Digest*, June 13, 1925, 25.

²⁸ David E. Sumner, *The Magazine Century: American Magazines Since 1900* (New York: Peter Lang, 2010), 91.

²⁹ See Stephen Bottomore, "Film Museums: A Bibliography," *Film History: An International Journal* 18, no. 3 (2006): 327-349.

³⁰ Citations have been taken from the schedule for The American Museum of the Moving Image (AAMI), September 10—October 2, 1988. AAMI was established in

1981 in a small space on the Kaufman Astoria Studio lot in Queens. See Andrea Estepa, "The American Museum of the Moving Image: Marching to Astoria," *The Village Voice*, September 13, 1988. In 1988 another Museum of the Moving Image (MOMI) opened in London.

³¹ Tom Gunning, "Introduction," in *Laurent Mannoni, The Great Art of Light and Shadow*, trans. and ed. Richard Crangle (Exeter, UK: University of Exeter Press, 2000), xx.

³² André Gaudreault has gone further along this path, calling into question the assumptions enabling the designation *early cinema*. See his *Film and Attraction: From Kinematography to Cinema*, trans. Timothy Barnard, fwd. Rick Altman (Urbana, Chicago and Springfield, Ill: University of Illinois Press, 2011).

³³ Jonas Mekas, "On the Expanded Cinema of Jack Smith, John Vacarro, Roberts Blossom, Arthur Sainer, Standish Lawder, Don Snyder, Heliczner, Vanderbeek," in *Movie Journal*, 213.

³⁴ In Jacobs' own words: "I've read that the guy who made the films usually traveled with, made his living by traveling with his camera which was also his projector and performing where he'd hand wind his film slowly, fast, back, forth. It would be like material to play with in front of an audience and then it got fixed for commercial reasons, distribution." "Kenneth Jacobs, Interviewed By Lindley Hanlon," 73.

³⁵ On an "object-based" expanded cinema see Jonathan Walley, "Identity Crisis: Experimental Film and Artistic Expansion," *October* 137 (Summer 2011) and "'Not an Image of the Death of Film': Contemporary Expanded Cinema and Experimental Film," in *Expanded Cinema: Art, Performance, Film*, eds. A.L. Rees, Duncan White,

Steven Ball and David Curtis (London: Tate Publishing, 2011). For an account of Robert Breer's kineographs/flipbooks and mutoscopes, which situates Breer's practice in the context of a longer history of installation exploring discarded film technologies and earlier devices for creating moving images see Andrew V. Uroskie, "Chapter 3: Moving Images in the Gallery," in *Between the Black Box and the White Cube* (London: University of Chicago Press, 2014).

³⁶ See Hollis Frampton, "For a Metahistory of Film: Commonplace Notes and Hypotheses," in *On the Camera Arts and Consecutive Matters: The Writings of Hollis Frampton*, ed. and intro. Bruce Jenkins (Cambridge, MA and London: MIT Press, 2009).

³⁷ Van Dyke arranged a performance of *THIRTIES MAN: Chapter One of The Big Blackout of '65* at MoMA in January 1967.

³⁸ See, in particular, Willoughby Sharp, "Luminism: Notes toward an understanding of light art," in *Light/Motion/Space: An exhibition organized by Walker Art Center in Cooperation with Howard Wise Gallery, New York* (Walker Art Center, April 8—May 21, 1967; Milwaukee Art Center, June 24—July 30, 1967).

³⁹ Sheldon Renan, *The Underground Film: An Introduction to its Development in America* (London: Studio Vista, 1967), 246.

⁴⁰ *Ibid.*, 247.

⁴¹ See Pam, "The N.Y. Apparition Theatre of Ken Jacobs," 104.

⁴² Email correspondence with author July 31, 2016.

⁴³ Tony Rayns, "Reflected Light," *Sight and Sound* 43, no. 1 (Winter 1973/74): 16.

One of Sitney's more contentious claims was that: "The structural film insists on its

shape, and what content it has is minimal and subsidiary to the outline.” P. Adams Sitney, “Structural Film,” in *Film Culture Reader*, ed. P. Adams Sitney (New York: Cooper Square, 2000), 327.

⁴⁴ David Curtis writes that Le Grice gave the name Filmaktion to a number of expanded cinema events in 1973. The first was at Gallery House in March. See his *A History of Artists’ Film and Video in Britain* (London: BFI, 2007), 224, n.33.

⁴⁵ For Malcolm Le Grice’s account of *Horror Film 2* see his “Real TIME/SPACE” [1972] in *Experimental Cinema in the Digital Age* (London: BFI, 2001). Lucy Reynolds argues that *Horror Film 2*, along with performances by Eatherly and Nicholson, borrows from the presentation styles and subject matter of phantasmagoria and vaudeville 3D shows. See her “Magic Tricks? The Use of Shadowplay in British Expanded Cinema,” in *Expanded Cinema: Art, Performance, Film*. Le Grice’s most recent performance of *Horror Film 1* was at Raven Row Gallery in London in 2017. His presentation of *Horror Film 1* and *Horror Film 2* was part of *Filmaktion—Gill Eatherley, Malcolm Le Grice, Annabel Nicolson, William Raban*, curated by Mark Webber, March 4 and 5, 2017. On *Horror Film 1* see Lucas Ihlein and Louise Curham, “Reaching Through to the Object: Reenacting Malcolm Le Grice’s *Horror Film 1*,” *Performance Matters* 1, nos. 1-2 (2015).

⁴⁶ Rayns, “Reflected Light,” 18.

⁴⁷ Jonas Mekas, “Movie Journal,” *The Village Voice*, October 25, 1973, 87.

⁴⁸ Malcolm Le Grice, “Vision: The London Festival of Avant-Garde Film,” *Studio International* 186, no. 960 (November 1973): 188.

⁴⁹ See files on the Festival of Independent Avant-garde Film (1973) in the British Artists' Film and Video Study Collection, Central St. Martins Museum, London.

⁵⁰ Jonas Mekas, "Movie Journal," *The Village Voice*, September 27, 1973, 61.

⁵¹ Not all British filmmakers pursued the latter course. In 1973, another British filmmaker, Tony Hill, developed *Point Source*, a short shadow and light play that he toured in the Netherlands, along with a number of other expanded cinema works. Most recently, Hill presented *Point Source* at *LFMC 50: Interrupting Light*, BFI Southbank, London, March 11, 2016.

⁵² For more details about these and other venues see Jacobs' curriculum vitae. Author File on Ken Jacobs, Anthology Film Archives Library.

⁵³ Julie Ault writes: "Idea Warehouse closed within one year, after a fire." See her "A Chronology of Selected Alternative Structures, Spaces, Artists' Groups, and Organizations in New York City, 1965-85," in *Alternative Art New York 1965-1985: A Cultural Politics Book for the Social Text Collective*, ed. Julie Ault (Minneapolis and London: University of Minnesota Press, 2002), 39.

⁵⁴ RoseLee Goldberg, "Performance: A Hidden History," in *The Art of Performance: A Critical Anthology*, ed. Gregory Battcock and Robert Nickas (New York: E.P. Dutton, 1984/ Ubu Editions, 2010), 22.

⁵⁵ Martin Puchner reported a decade ago that in 1967, "the journal could boast a circulation of 20,000, including a subscriber list of 8,500 and 1,200 library subscriptions". By 1975 that figure had shrunk to a still considerable 15,000. See Puchner, "The Histories of *TDR*," *TDR: The Drama Review* 50, no. 1 (Spring 2006): 21.

⁵⁶ See N. A. Valyus, *Stereoscopy* (London: Focal Press, 1962), 209 and 337.

⁵⁷ Ray Zone, *Stereoscopic Cinema & the Origins of 3-D Film, 1838-1952* (Lexington, KY: University of Kentucky Press, 104-105.

⁵⁸ Email correspondence with author March 28, 2013.

⁵⁹ Erika Munk, for instance, wrote of *Air of Inconsequence* (1977): “This is artifice not deception, for the intent seems to be to make us think about the fragility of visual perception while enjoying its results.” See her “Shades of the Future,” *The Village Voice*, December 26, 1977, 79.

⁶⁰ See Birgit Hein, “The Structural Film,” in *Film as Film: Formal Experiment in Film 1910-1975* (London: Arts Council of Great Britain, 1979). Catalog of an exhibition: Hayward Gallery, London, 3 May-17 June 1979.

⁶¹ Ibid., 104.

⁶² Paul Sharits, “Undated (early March?), 1967,” in *Buffalo Heads: Media Study, Media Practice, Media Pioneers, 1973-1990*, eds. Woody Vasulka and Peter Weibel (ZKM| Center for Art and Media, Karlsruhe, Germany and Cambridge, MA and London: MIT Press, 2008), 260.

⁶³ John Matturri, “Ken Jacobs on Theater of Embarrassment,” *Idiolects* 8 (Spring 1980): 15.

⁶⁴ For an examination of Jacobs’ thinking about visual perception in relationship to the teachings of Hans Hofmann see Federico Windhausen, “Theories of Moving Pictures: Ken Jacobs after Hans Hofmann,” in *Optic Antics: The Cinema of Ken Jacobs*, eds. Michele Pierson, David E. James and Paul Arthur (New York: Columbia University Press, 2011).

⁶⁵ *Febrile Fiber Phantoms* was presented at the Cleveland Institute of Art in 1995.

⁶⁶ “*Slow Is Beauty*”—*Rodin* was performed January 24, 2004.

⁶⁷ Munk, “Shades of the Future,” 79.

⁶⁸ David Ehrenstein, “Ken Jacobs,” *Film: The Front Line 1984* (Denver: Arden Press, 1984), 42.

⁶⁹ For the first English translation of Eisenstein’s essay in full see Sergei Eisenstein, “On Stereocinema (1947),” *Public* 24, no. 47 (Spring 2013). Translation by Sergey Levchin.

⁷⁰ *THE IMPOSSIBLE: Chapter Four “Schilling”* (1980) was the first Nervous System performance to adopt the shutter/propeller system.

⁷¹ See document KBP, Vasulka Archive. Available at:

<http://www.vasulka.org/archive/sitemap.html> (Accessed 19 April, 2016).

⁷² For an overview of the thinking behind early programming at The Kitchen see Lucinda Furlong, “Notes Toward A History Of Image-Processed Video: Steina and Woody Vasulka,” *Afterimage* 11, no. 5 (December 1983).

⁷³ See Lenka Dolanova with Woody Vasulka, “Woody Vasulka: Dialogue With the (Demons in the) Tool,” in *The Emergence of Video Processing Tools, Volume 1*, eds. Kathy High, Sherry Miller Hocking and Mona Jimenez (Intellect: Bristol/ Chicago: University of Chicago Press, 2014), 281-283.

⁷⁴ Amy Taubin reported this information in “3D/Milwaukee,” *The Soho Weekly News*, March 10, 1977, 33.

⁷⁵ Film curator, Mark McElhatten remembers having just this thought during Schilling's performances at the Collective. Conversation with author, New York City, October 6, 2015.

⁷⁶ See excerpt of program notes for Jacobs' performance of *THE IMPOSSIBLE: Chapter Three "Hell Breaks Loose"* at MoMA as part of the Cineprobe series (January 19, 1981), in Hubert Klocker, et. al. (eds.) *Alfons Schilling: Ich/Auge/Welt—The Art of Vision* (Vienna and New York: Springer, 1997), 185.

⁷⁷ Ken Ross, "Excerpts From A Conversation With Alphons Schilling," *Idiolects* 6 (June 28, 1978), 18.

⁷⁸ *Ibid.*, 18.

⁷⁹ "John G. Hanhardt: Whitney Museum of American Art, New American Filmmakers' Series, May 1978," in Hubert Klocker (ed.), *Alfons Schilling*, 337.

⁸⁰ For a personal account of the multi-institutional study of early cinema in New York City in the 1970s see Tom Gunning, "Attractions: How They Came into the World," in *The Cinema of Attractions Reloaded*, ed. Wanda Strauven (Amsterdam: Amsterdam University Press, 2006).

⁸¹ Maturri, "Ken Jacobs on Theater of Embarrassment," 15.

⁸² *Ibid.*, 15.

⁸³ For an account of audience members' responses see Scott MacDonald, "Ken Jacobs and the Robert Flaherty Seminar," in *Optic Antics*.